

to their houses. Eleven became sick with typhoid; the youngest was 11 months old, the oldest about 35 years; in some the temperature was normal at from eleven to fifteen days, in others about twenty-one days; in one in thirty-six days and in another about forty days, counting the relapses. All got well. The average duration of the disease was fourteen or fifteen days. Undoubtedly several more cases would have occurred in those families had they not been instructed to boil their drinking water. Later the barrels used as reservoirs were cleaned out and three more or less decomposed squirrels were found in the barrels.

Some two or three years ago this town used to be a regular hotbed for typhoid fever. The cause was in the water supply. The fever would be most severe in December and January; at that time the usual water supply was insufficient and water from a stream polluted with human excrement was turned into the city reservoirs.

THE USE AND THE ABUSE OF THE BICYCLE.

Read before the Central Wisconsin Medical Society, at Evansville, Wis., June 29, 1897.

BY JAMES MILLS, M.S., M.D.

JANESVILLE, WIS.

The world is on wheels; doctors and ministers, lawyers and teachers, husbands and wives, kings and queens, old and young, rich and poor, are all equal in cycling; and all must pedal, sweat and breathe dust alike. In this they share the same joys and sorrows. Cars and steamboats are wholesome affairs, so far as equalizing our outward conditions is concerned; but your true leveler in locomotion is the bicycle.

In this "age of inventions," what the telegraph and the telephone do for thought and voice, the bicycle does for the body. It is a machine with the power of impulsion induced by the muscular motion of the rider's limbs; it is a horse and buggy combined; costs less than either and fattens on air. It enables the doctor to outride microbes, and catch ozone on the wing. It puts him in prime condition for visiting his patients, and is an amazing economizer of his time and energy. It suggests to him the importance of caution, courage, courtesy and self-reliance; and particularly of "looking before leaping." Like the moth that circles about the flame, he will find the danger of "scorching"; and possibly like it, take warning from the sad mishaps of others who often outride him.

It is for the general public interest, that legitimate and orderly cycling should be encouraged. The use of the bicycle for traveling, especially in the country, has in it the germ of the solution of the improvement of public highways. When wheelmen have become sufficiently banded together to compel the maintenance of well-paved streets and good roads and the safe use thereof by them, there will be a heavy falling off in the tribute paid by the people to elevated-track magnates and traction barons, who now control our street and railway conveyances, and tax the people for the proud privilege of getting to and from their daily labors.

Beyond all these, there is the certainty of a higher physical standard for the race in the universal employment of a vehicle which insures to its users fresh air and healthful bodily exercise. I believe that the bicycle, properly used, is of very great value to a large number of people who would not otherwise indulge in sufficient outdoor activity.

The majority of accidents to cyclers in the cities

are the results of inexperience in riding and the carelessness of the drivers of horses. In Germany and some other European countries, this fact is recognized; and before a novice is allowed to go out upon the public highways, he or she is required to give an exhibition of proficiency before duly appointed examiners. We venture to assert that this would obviate many of the present dangers which are universally admitted to need attention, and would thereby appreciably reduce the number of street accidents.

The subject of bicycling for women is beginning to attract the notice of medical writers. Dr. Robert L. Dickinson of Brooklyn, N. Y., is among the foremost who have given the subject attention. Some French, English, German and American gynecologists have given their opinions upon the subject, and the greater number of them agree that, as a rule, where this exercise is not carried to excess, it is a beneficial one.

In it we seem to have found, at last, a form of an open air muscular work, which induces women to spend many hours away from close rooms and indoor tasks. It exercises and strengthens a large number of muscles of the body, far more than is generally supposed. Ask the beginner or the expert, how much bodily balance is required. Ask the woman who sits upright, holding tightly to the handle bars as she works up a grade, how much arm-and-shoulder pull there is in it.

Since bicycling is one of the few popular physical exercises that attract women, it will, under properly prescribed conditions undoubtedly show itself capable of large results as an agent in curing pelvic disorders. There is no problem that troubles the physician more than the prescription for proper physical exercise by women in view of her disabilities and the disadvantages under which she has suffered in attempts to obtain pleasurable and beneficial muscular action. It seems hardly too much to say that the promises from the bicycle are far-reaching. Through it and the habits it will engender, we look for better and freer dress; for rounder limbs, fuller lung cavities, steadier nerves, and better developed muscles.

There are four demands before which the costume of the wheelwoman must pass in review: health, fitness, fashion and artistic beauty.

The third of these is ever at odds with the others. As for art in personal adornment, it can not be said to exist among people who tolerate a combination of sweaters, bloomers and leggings, or the deformed wheelwoman of alleged fashion journals. Yet the principle at the foundation of the dress question seems exceedingly simple. For play of the muscles, freedom is the first requisite, whether in cycling or scrubbing; and we must therefore instruct our patients to make certain modifications of their dress as necessary.

One has but to glance at ten riders of the hampered sex, to see nine who, ignorant of some of the rules of good riding, misapply force, waste effort, and run a certain risk of harm to themselves. The trouble is due chiefly to the lack of training, since the pupil in bicycling is turned adrift on the road as soon as she can balance a wheel or can mount and dismount one. Instruction should be insisted upon to obviate bad habits of riding; and unmerited criticism will thus be avoided.

It would be superfluous before an audience of physicians to do more than to name the ordinary precautions necessary for women who take up wheeling.

We lay stress on carefully increasing the length of the ride, and on strict attention to the difficulties thus experienced; on heeding the warning given by palpitation of the heart and by labored breathing; on signs of strain of the right heart, which is robust only in laborers and athletes; on frequent rests; on giving heed to chilling and over fatigue; on light food during exercise; on relaxation of the muscles after riding; and on entire abstinence from such riding during the menstrual period.

I have the report of the wife of a physician, who, after riding her wheel for half an hour against a hard wind, had sudden cardiac dilatation, which gave rise to very serious symptoms, and which it required eight months to reduce.

No physical exercise has proved to be more beneficial in many insane hospitals than the riding of the wheel. It is attractive, novel and interesting to the patients, and brings excellent curative results.

Bicycle riding has certain advantages over the present style of horseback riding. The fashionable contorted seat on a saddle horse does not develop the body symmetrically, and the awkwardness, due to the fact that the transverse diameter of the pelvis and the transverse diameter of the upper trunk do not correspond, means strain, to say nothing of the useless effort that a trotting gait entails.

When women get into the habit of riding on horseback, part of the time with the stirrup on the right side, and part of the time with the stirrup on the left, one objection to the spinal rotation and the unsymmetrical development will be overcome; and it is to be presumed that eventually all women will ride astride, as their great-grandmothers did before the days of Elizabeth. Expense precludes this form of exercise for most women. Cheapness, safety, accessibility, and the small amount of preparation required, are all on the side of the wheel, and hold good even to a greater degree for women than for men.

The question is often asked, how is it that we advise women to ride a wheel, while a strong protest has been entered against her running the sewing machine, on account of the harm it may do to her pelvic organs. It seems to me that the conditions under which the two forms of leg exercise are taken, are radically different. A woman at the sewing machine must focus her eyes accurately on the point at which the needle is at work, and must drive the material along in even lines under the rapidly moving needle and within the margin of one-sixteenth of an inch. Such a position to a corseted woman brings a strong pressure on the pelvic contents and prevents free circulation.

A word of warning is needed as to the undue pressure that the bicycle seat is liable to make upon the parts of the body in contact with it.

The seat of the bicycle for men seems to have been modeled after the saddle that was found suitable in riding horseback.

Women have generally found great difficulty in having the seat so adjusted as to be comfortable to them.

To relieve them in this respect, several alterations become necessary. In the first place, a woman's pelvis is broader than a man's; and the tuberosities of the ischia are farther apart in woman than in man; consequently, the width of the rear portion of the seat needs to be greater. Secondly, the anterior projection of the seat must be tilted downward. This, however, requires the most delicate adjustment; for if the seat

is tilted too far, its slope will cause the rider to slide forward, so as to rest almost entirely upon its anterior projection, and so defeat the object of the tilting.

There are two possible objections to bicycling by women. The one, over exertion, should be and is easily controlled; the other may be entirely eliminated by the use of the proper seat. Bicycle riding can do no possible harm to a healthy woman, any more than it can to a man, unless it is abused. And for neurasthenics it is an excellent remedy, probably the most valuable we have.

The principal points connected with the proper construction of the machine itself are those relative to a proper fitting seat and an arrangement of its parts enabling the rider to assume a reasonably erect position, so that the weight of the body is in part upon the pelvic bone, and the rest of it is borne by the feet upon the pedals and the hands upon the bars.

Physicians ought to have personal knowledge of this exercise. It is our duty to so advise wheel-women that they may be carefully trained by competent instructors as to the right methods of pedaling, the correct position of the body, and the height of the seat.

It is plain that the wheel is destined to make a place for itself in the world, not only as a luxury and source of pleasure, but as a positive necessity for health and physical development to hundreds of thousands.

FRACTURES OF THE SKULL AND INJURIES TO THE BRAIN.

Read before the Milwaukee Medical Society, May 25, 1897.

BY F. SHIMONEK, M.D.

SURGEON TO THE JOHNSTONE EMERGENCY HOSPITAL.
MILWAUKEE, WIS.

Case 1.—B. F., German, age 35 years, book agent; was brought into the Emergency May 1, 1897, about midnight; unconscious, right motor hemiplegia, respiration labored and irregular and of Cheyne-Stokes character, hemorrhage from right ear. Pulse 70, full and strong, indicating cerebral compression; temperature, 97 degrees; by next morning it had arisen to 100.2 degrees and pulse to 98; respirations, 26.

History: About 10 P.M., while intoxicated, fell down stairs and was not found until about midnight. I saw him the following morning in the above-stated condition.

Examination: The scalp was very greatly swollen, so much so that it was impossible to make out the condition of the skull underlying this tumefaction. There were no marks of injury upon the scalp. An oblong edema extended from a little distance behind the bregma on the right side of the head downward and backward to the apex of the mastoid process. May 2, pulse, 84; temperature, 99.2; respirations, 20; temperature rose to 101 degrees. Ice was applied immediately and this application kept up until May 3, when examination revealed a little motion in the right arm and leg and not quite such profound unconsciousness. The edema having somewhat subsided we were able to feel a short ridge, which we decided to be a fracture.

It is a known fact that a simple exudate in the scalp, or rather in the pericranium, is frequently mistaken for a fracture; but it is quite easy to differentiate an exudate from a ridge of a fractured bone by simply taking into consideration the fact that an exudate being a displaceable material, can by pressure applied firmly and steadily for a few seconds be indented and made to yield before the finger, while a